

VERSION WITH MARKINGS TO SHOW CHANGES MADE:

IN THE SPECIFICATION:

Before paragraph [0001], delete "Description" and add the heading --
BACKGROUND OF THE INVENTION--.

Before paragraph [0004], add the heading --SUMMARY OF THE INVENTION--.

Amend paragraph [0005] as follows:

[0005] -- This object is achieved according to the invention by ~~the features of~~
~~patent claim 1~~ an electromotive drive, with at least one fan wheel which
can be driven by an electric motor, wherein an electromagnetic slip
coupling dependent on the motor speed is arranged between the motor
shaft and the freely rotatably mounted fan wheel, wherein an
electromagnetic speed limiting and governing device which limits the
delivery of cooling air to the required quantity of cooling air is provided
between the motor shaft and the fan wheel, wherein it is possible as
from a predeterminable motor speed for the fan wheel speed to be
reduced in relation to the motor speed in such a way that the driving-
along effect of the slip coupling can be neutralized with increasing speed
of the motor shaft until it is almost ineffective and increases again to the
full driving-along effect as the motor speed drops, wherein the fan wheel
is mounted freely rotatably on the motor casing by means of a mounting
and wherein the motor shaft bears permanent magnets and the hub of
the fan wheel has an electrically conductive part or the fan wheel is

provided with permanent magnets and the motor shaft is provided with an electrically conductive part. This achieves the effect that the quantity of cooling air at relatively low motor speeds is available to an adequate extent, while the quantity of cooling air to be delivered at relatively high or high motor speeds no longer increases in proportion to the increasing motor speed. The fact that, according to the invention, the fan wheel is mounted in the motor casing or on the bearing plate, and consequently not on the motor shaft, always results in an adequately high fan-wheel bearing speed, even when the relative speed of the motor shaft to the fan wheel is small or approaches zero. As a result, better running behavior and improved bearing lubrication of the fan wheel mounting are achieved. Whereas in the case of the known mounting of the fan wheel on the motor shaft the lubricant is forced by the then rotating bearing outer race and the centrifugal force toward the outer race and leads to increased bearing friction, the bearing outer race of the mounting of the fan wheel arranged in the motor housing or in the motor bearing plate is stationary, which reduces the bearing friction. The mechanical isolation of the fan wheel from the rotor of the electric motor has the effect of reducing for example bearing loads caused by a rotor imbalance.--.

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Amend paragraph [0010] as follows:

[0010] --The invention also comprises a configuration ~~as claimed in claim 8, in~~ which the electromagnetic slip coupling of which operates on the reluctance principle, whereby it ~~being~~ is possible for the slip coupling parts also to be configured without the cage winding or copper sleeve.-.

Paragraph [0012] delete completely.

Before paragraph [0013], add the heading --BRIEF DESCRIPTION OF THE DRAWING--.

Before paragraph [0014], add the heading --DETAILED DESCRIPTION OF PREFERRED EMBODIMENTS--.

Page 8, after the heading "CLAIMS" and before the first claim add --What is claimed is:--.

IN THE CLAIMS:

Amend the following claims:

3. (Amended) The electromotive drive as claimed in claim 1 ~~or~~ 2, characterized in that the mounting (4, 4') of the fan wheel (2) is seated with a bearing outer race in a bearing receptacle (8) of the motor casing (5) or motor bearing plate and an annular formation (9) on the fan wheel hub (7) is supported against the rotating bearing inner race of the fan wheel bearing (4, 4').

5. (Amended) The electromotive drive as claimed in ~~one of claims~~ claim 1 to 4, characterized in that the permanent magnets (6) and/or the sleeve (10) are arranged in an annular or segmentally annular manner on the hub (7) of the fan wheel (2) or on the motor shaft (3).
6. (Amended) The electromotive drive as claimed in ~~one of claims~~ claim 1 to 5, characterized in that the fan wheel (2) has a hub (7) of nonmagnetic material, such as aluminum, or in that the fan wheel consists of plastic and a sleeve (10) of electrically conductive material is fitted into the fan wheel hub.
7. (Amended) The electromotive drive as claimed in ~~one of claims~~ claim 1 to 6, characterized in that the parts of the electromagnetic slip coupling (6, 10) are arranged in coaxial or radial arrangement in relation to the motor shaft (3).
8. (Amended) The electromotive drive as claimed in ~~one of claims~~ claim 1 to 7, characterized in that the motor shaft bears permanent magnets and segments are cut out in the shaft of the fan wheel, or in that the fan wheel is provided with permanent magnets and the motor shaft has segmental cutouts over its circumference in such a way that, in the interaction of the segmented fan wheel hub with the permanent magnets of the motor shaft, or in the interaction of the segmented motor shaft with the permanent magnets of the fan wheel, and dependent on the motor speed, the speed limiting and governing device is effective.

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9. (Amended) The electromotive drive as claimed in ~~one of claims~~ claim 1 to 7, characterized in that the center of the permanent magnets of one part of the slip coupling is axially offset in relation to the center of the other part of the slip coupling, forming a cage.
11. (Amended) The electromotive drive as claimed in ~~one of claims~~ claim 1 to 40, characterized in that one part of the slip coupling comprises one or more bar magnets fitted in bores of the motor shaft or in bores of the fan wheel.
12. (Amended) The electromotive drive as claimed in ~~one of claims~~ claim 1 to 44, characterized in that at least one fan wheel (2) for encapsulated or enclosed-ventilated electric motors (1) for rail vehicles and rail-bound vehicles for suction or pressure ventilation is freely mounted and formed on at least one motor bearing plate (5).
13. (Amended) The electromotive drive as claimed in ~~one of claims~~ claim 1 to 42, characterized in that the parts of the electromagnetic slip coupling (6, 10) are dimensioned such that the maximum breakdown torque or the highest driving-along effect between the motor shaft (3) and the fan wheel (2) is reached at a predetermined motor speed, which is sufficient to overcome the drop in pressure of the aerodynamic circuit.

14. (Amended) The electromotive drive as claimed in ~~one or more of claims~~
claim 1 to 13, characterized in that it is intended for three-phase traction
motors capable of being operated at high speeds.

Add the following claims:

15. (New) The electromotive drive as claimed in claim 4, characterized in that
the permanent magnets (6) and/or the sleeve (10) are arranged in an
annular or segmentally annular manner on the hub (7) of the fan wheel (2) or
on the motor shaft (3).
16. (New) The electromotive drive as claimed in claim 5, characterized in that
the fan wheel (2) has a hub (7) of nonmagnetic material, such as aluminum,
or in that the fan wheel consists of plastic and a sleeve (10) of electrically
conductive material is fitted into the fan wheel hub.
17. (New) The electromotive drive as claimed in claim 5, characterized in that
one part of the slip coupling comprises one or more bar magnets fitted in
bores of the motor shaft or in bores of the fan wheel.
18. (New) The electromotive drive as claimed in claim 4, characterized in that
one part of the slip coupling comprises one or more bar magnets fitted in
bores of the motor shaft or in bores of the fan wheel.

19. (New) The electromotive drive as claimed in claim 3, characterized in that the parts of the electromagnetic slip coupling (6, 10) are dimensioned such that the maximum breakdown torque or the highest driving-along effect between the motor shaft (3) and the fan wheel (2) is reached at a predetermined motor speed, which is sufficient to overcome the drop in pressure of the aerodynamic circuit.
20. (New) The electromotive drive as claimed in claim 4, characterized in that the parts of the electromagnetic slip coupling (6, 10) are dimensioned such that the maximum breakdown torque or the highest driving-along effect between the motor shaft (3) and the fan wheel (2) is reached at a predetermined motor speed, which is sufficient to overcome the drop in pressure of the aerodynamic circuit.
21. (New) The electromotive drive as claimed in claim 3, characterized in that it is intended for three-phase traction motors capable of being operated at high speeds.
22. (New) The electromotive drive as claimed in claim 11, characterized in that it is intended for three-phase traction motors capable of being operated at high speeds.

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23. (New) The electromotive drive as claimed in claim 12, characterized in that it is intended for three-phase traction motors capable of being operated at high speeds.

Add B' →

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REMARKS


This Amendment is submitted preliminary to the issuance of an Office Action in the present application.

Applicant has amended claims 3, 5-9, 11-14 to remove any multiple dependency of the claims. In addition, applicant submits herewith new claims 15 to 23 which set forth subject matter of original claims 5, 6, 11, 13, 14, respectively. The specification has been amended to present it with proper headings and to delete any reference to particular claim numbers.

When the Examiner takes this application up for action, it is requested to take the foregoing into account.

The Commissioner is hereby authorized to charge fees which may be required, or credit any overpayment to Deposit Account No. 06-0502.

Respectfully submitted,

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